Fostering Digital Transformation: *The OECD's Role*

Microsoft Innovation & Policy Center | 901 K Street, NW, 11th Floor, Washington, D.C. 20001
March 8, 2017 **|** 8:30 am – 7:00 pm EST

Conference Summary

Welcome to The Microsoft Innovation and Policy Center:
- **Dorothy Dwoskin**, Senior Director of Global Trade Policy and Strategy, Microsoft Corporation, welcomed attendees from the OECD, Business at OECD (BIAC), USCIB member companies, U.S. government representatives, press and other individuals to the conference at the Microsoft Innovation & Policy Center in Washington DC. Dwoskin noted that the topic of the conference represents a new agenda, one that will enable people to get on the "right side" of digital issues. Reflecting the extent to which the entire economy has been transformed, she also underscored the importance of broadening engagement on digital policy issues to include non-technology companies to ensure a breadth and diversity of views on these important issues.

Welcome from USCIB:
- USCIB President and CEO **Peter M. Robinson** echoed Dorothy's welcome, noting that this conference is USCIB's third collaboration with BIAC and the OECD. The conference topics are not simply a matter of the digital economy, but are relevant to the entire economy, he said, emphasizing that there is not one segment of the economy that has not been touched by the digital revolution. Robinson noted that the substantive work of the OECD deserves greater attention in policymaking circles. Whether it is providing privacy and security guidelines for the online age or developing the landmark 2011 Internet Policymaking Principles, the OECD has a great deal of high-quality, evidence-based analysis and policymaking tools to offer Washington and the broader international community, he noted.

Welcome from BIAC:
- **Bernhard Welschke**, Secretary General of Business at OECD (BIAC), acknowledged the importance of USCIB's input and knowledge to BIAC. Welschke concurred with Dwoskin that we need to "broaden the base of our troops" in policy discussions, since the digital transformation cuts across all sectors -- automotive, machine tool manufacturing, services, and so forth. BIAC is a place where business comes together across borders and where we shape the OECD's work as an important stakeholder, he said. Welschke noted the wave of populism, Brexit, globalization, and immigration-related problems around the globe and cautioned that we must make sure that *this* debate does not turn against the good cause of digital transformation. He stressed the need to organize ourselves and the policymaking process through rigorous, solid knowledge. Welschke also highlighted BIAC's key role in the German B20/G20 processes as a Network Partner.

Keynote Speaker

Eric Loeb, Senior Vice President, International External and Regulatory Affairs, AT&T, and Chair of USCIB's ICT Policy Committee introduced **David Redl**, [1] Chief Counsel for Communications and Technology, Committee on Energy and Commerce, U.S. House of Representatives. Loeb highlighted the breadth of Redl's expertise on digital economy issues and his generous guidance to USCIB and its members on such issues as the importance of ensuring free flows of information globally, securing the digital online environment, and bridging the digital divide. Highlights of Redl's keynote address follow:

- Redl acknowledged that he provides counsel to Rep. **Greg Walden** (R, Oregon), chair of the House Energy and Commerce Committee, and Rep. **Marsha Blackburn** (R, Tennessee), chair House Energy and Commerce Subcommittee on Communication and Technology, so his comments reflect their policy priorities.
- Redl underscored that a driving influence for much of the full committee and subcommittee's work on digital economy and communications issues is the belief that the Internet is the unifying factor that makes modern commerce possible.
- Redl applauded the OECD's digital economy work, noting that as the Internet has developed in the past twenty years, the OECD "has been a forward-looking voice," providing such valuable policymaking instruments as the 2011 Internet Policy Principles.
- He noted the Energy and Commerce Committee's Policy Paper on digital economy issues, which highlights the following elements as critical to bringing the benefits of the Internet to every American: (1) ensuring the free flow of information globally; (2) creating a safe and secure online environment, including consumer protection; (3) improving broadband connectivity; and (4) fostering investment, especially in cutting-edge communications technologies like 5G wireless.
- Redl underscored the importance of building out broadband, calling it the "revolution that brought American commerce to the world." He observed that despite everyone's best efforts, there are still parts of the United States that lack the infrastructure to meet universal availability and adoption. Government spending alone cannot bridge this divide. Rather, it is critical to foster business investment in U.S. infrastructure and network development, streamline regulation, and merge duplicative programs. Redl emphasized that government agencies need to work more effectively together.
- Redl declared that 5G wireless technology can spur jobs' creation, smarter cities, smarter healthcare, and smarter transportation, such as self-driving cars.
- He concluded that the House Energy and Commerce Committee stands ready to serve consumers to ensure that economic barriers do not stand in the way.

Conference Prologue: The Role of the OECD in Enabling Digital Transformation

Douglas Frantz, OECD Deputy Secretary General
- Frantz emphasized that there has never been a more important time to be discussing these issues in view of the OECD's focus on connecting the world.
- He highlighted the OECD's long-held belief in the merits of participation by non-governmental stakeholders in the policymaking process, noting that as early as 1962, the OECD Council decided to open the organization's doors to international NGO's— such as BIAC and the Trade Union Advisory Committee (TUAC).

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[1] Speaker Biographies, "Fostering Digital Transformation: *The OECD's Role*," Washington, D.C., March 8, 2017.

- According to Frantz, the multistakeholder model and having business "at the table" have been invaluable in considering the challenges and opportunities presented by the digital transformation of the economy.
- In view of the importance of ICTs in realizing nearly all fifteen of the UN Sustainable Development Goals (SDGs), the multistakeholder model has further enabled government-private sector dialogue on SDG implementation, he proposed.
- Frantz recalled the 1998 Ottawa Ministerial, where the OECD worked closely with business to ensure a light-handed approach to regulation. Those principles were echoed in the 2008 Seoul Declaration, which led to participation of civil society as an OECD stakeholder, and was reaffirmed in the 2011 Principles on Internet Policy Making. The latter encapsulated three decades of OECD policymaking related to ICTs.
- The June 2016 Cancun Ministerial, "The Digital Economy: Innovation, Growth and Social Prosperity," demonstrated the OECD's continuing commitment to an open Internet and delved into related issues such as infrastructure, business models, online trust, and emerging technologies, such as the Internet of Things (IoT), Big Data, and Artificial Intelligence (AI).
- Concerning IoT and Big Data, Frantz highlighted the OECD's finding that aggregated data holds the promise of economic growth and social prosperity and achieving the SDG's. But the degree of adoption depends on the ability of governments to engage stakeholders and create policies that build user trust, ensure interoperability, and foster innovation.
- Frantz noted that AI poses new economic and social opportunities and challenges. The OECD may consider developing an OECD Council recommendation aimed at guiding the development of AI research and applications. This is the "moment of singularity," he said. Who will regulate AI? What are the ethical guidelines? He urged business to contemplate these issues and be prepared to inform the OECD's AI work accordingly.
- Frantz highlighted that the OECD Annual Ministerial Council Meeting will also focus on digital transformation and globalization. There has been a clear backlash against globalization. Frantz proposed that the digital revolution gives us a "second chance" to ensure that the benefits of digitalization are spread more evenly across the global and trickle down to SMEs. "Globalization is not broken, but we did not do enough to spread the benefits. If there are losers, we can cushion the losses," he said.

Questions and Commentary:

Question: Concerning the debate around globalization and digital transformation, this is about balance. How do we make sure that we have a forward-looking perspective and not just a distributional one?

- Frantz said the OECD is seeking a way to strike that balance through its horizontal project, "Going Digital," which will cut across 14 Committees and 10 Directorates, and will help set standards and guidelines. He emphasized that the business community should contribute to the OECD's work, but also work with governments to help realize the SDGs.
- Responding to a related question, Frantz further proposed a careful review of innovations in lifelong education and retraining for workers displaced from "rust-belt" industries. "These are innovations we need to consider that can give us a second chance to spread technologies and wealth, especially in Africa, to mitigate migration surges," he said.

Andrew Wyckoff, Director of OECD Directorate for Science, Technology and Innovation (STI)
Wyckoff presented a Power Point, which reviewed the OECD's support for the G20 Ministerial and previewed the horizontal "Going Digital" project. Key points included:

- The United States invited the OECD to participate in the 2009 G20 Meeting in Pittsburgh. This involvement carried through to the 2016 G20 Meeting in China, at which the OECD was tasked to facilitate work focused on resolving (China-fueled) steel excess capacity in the global market.
- When Germany launched the 2017 G20 process, the German Secretariat asked the OECD to prepare a report to support the G20 focus on digital transformation of the economy, as well as serve as a facilitator to the G20 Digitalization Task Force.
- Report has three parts: (1) an assessment of digitalization in G20 economies; (2) 10 key policy challenges; and (3) core policy recommendations for the future[2].
- Wyckoff clarified that the OECD's G20 work and its horizontal project "Going Digital" project are proceeding on parallel tracks with different timeframes. The G20 work will wrap up at the July 7-8 G20 Leaders' Summit, and focus on key building blocks, Industry 4.0, metrics, and a "roadmap." The "Going Digital" project will take two full years, involve 14 OECD policy domains, include measurements and yield a plethora of products – not a "giant book" (100-odd pages) -- such as short reports and policy briefs, toolkits, a digital "boot camp" and others.

Anne Carblanc, Head of OECD Digital Economy Policy Division
Carblanc presented a Power Point, which explained the framework for the "Going Digital" horizontal project and discussed elements of the project. Key points include:

- The OECD has undertaken the "Going Digital" project to follow through on several Cancun Ministerial mandates (see the Declaration). Carblanc highlighted that the OECD is in a unique position to undertake this kind of project because it engages with key countries – including emerging economies like China, South Africa, Indonesia, and India – as well as with business, technical community, civil society stakeholders and multilateral entities, like the G7 and G20.
- Carblanc described governance of the project, which will be led by an informal Steering Group composed of two representatives from each of the substantive committees, plus representatives from each stakeholder group.
- There are three "Going Digital" pillars: (1) an integrated policy framework for analyzing digital transformation (beginning with a questionnaire); (2) Committee outputs related to the digital transformation (in-depth policy analysis in specific policy domains); and (3) cross-cutting modules to gain new insights into the big challenges faced in the digital era. Each pillar will inform the next.
- The questionnaire will seek to determine how digital transformation manifests in different areas, such as the relevance of borders and locations, speed and scale without mass, to name a few. It also will explore policy issues raised by digitalization, such as investment, infrastructure and access.
- Carblanc said the goal is to help governments approach the digital transformation of the economy in a coherent, proactive, and whole-of-government manner. The work within the three pillars ultimately will produce an integrated policy framework for digital transformation, which will be built upon a foundation of macroeconomic and framework conditions and accessible digital infrastructures and services. See the Power Point for details and graphic illustrations.

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[2] The OECD's report for the German G20 process, Key Issues for Digital Transformation in the G20, proposes four policy recommendations: (1) boost investment In digital infrastructure; (2) ensure competition in the ICT sector and in the broader economy; (3) establish sufficient trust in the digital economy; and (4) make the digital transformation truly inclusive by addressing SME needs and digital skill development and retaining.

Session 1: The Digital Economy and Information Society of the Future

This session offered a vision of an enabling environment to support the economic and societal benefits offered by such emerging technologies as big data and analytics, AI and other innovative applications. It also explored how companies in a broad array of sectors have tapped the transformational power of ICTs to become vital new players in the digital economy.

<u>Moderator:</u>   **Robert Pepper**, Head of Global Connectivity Policy and Planning, Facebook

<u>Speakers:</u>   **Ross LaJeunesse**, Global Head of International Relations, Google
            Carolyn Nguyen, Director of Technology Policy, Microsoft
            Jacquelynn Ruff, Vice President, International Public Policy and Regulatory Affairs, Verizon
            Ruth Wandhöfer, Managing Director and Global Head of Regulatory & Market Strategy, Citi

Robert Pepper, Head of Global Connectivity Policy and Planning, Facebook**,** opened the session by underscoring the need for enabling frameworks to ensure that the benefits of digital transformation can be reaped. "This is about business models and how policy affects business innovation and growth," he said. "This necessitates a conversation between the business community, the OECD and other stakeholders to design an enabling framework." Highlights of the speakers' remarks follow:

Jacquelynn Ruff, Vice President, International Public Policy and Regulatory Affairs, Verizon
- Ruff focused on today's wireless generation and the promise of 5G. She noted that innovative and robust networks will be critical for the future digital economy – and that is what 5G will offer. She then detailed 5G's features and capabilities, which include:
  - Delivery speeds in gigabytes (instead of megabytes), which is 100 times faster than 4G;
  - Low latency (a millisecond for something to reach the end user)
  - An architecture composed of many small cells (antennas) using spectrum, which enables higher frequency and wider swaths of spectrum.
- Verizon is currently testing 5G on the higher frequency bands that the Federal Communications Commission (FCC) has made available for this purpose. During the first half of 2017, Verizon will open 5G to pre-commercial volunteer customers.
- The evolution of "wireless fiber," a technology that uses lasers and optical transceivers to send signal packets directly through the air instead of through cables, will provide speed for wireless service that no one thought possible with anything by fiber optic cables. Ruff described this as an evolution – not a replacement – for 4G, noting that it holds promise for Internet of Things (IoT) use cases, remote health care, and autonomous vehicles.
- To realize the full benefits of these innovations, Ruff emphasized that governments must provide adequate spectrum and remove barriers to deployment. She echoed David Redl's comments on the need to "streamline regulations" and noted that this approach is needed to create a pro-investment environment. Ruff anticipates connectivity and services that will be more complex and integrated.

Ruth Wandhöfer, Managing Director and Global Head of Regulatory Policy, Citi
- Wandhöfer pointed out that financial service and money essentially are data, but many individuals do not have requisite access to or skills to manage this data. She concurred with

OECD Deputy Secretary General Frantz that the concept of a second chance at globalization, which would entail re-skilling and digital education to enable increased participation in the digital economy, represents a positive way forward.

- Wandhöfer noted that Citi relies on data being ubiquitous around the world. Policies that effectively create barriers inhibit Citi's ability to do business and manage risk. In addition, she pointed out that when an industry is highly regulated, it is less able to benefit from the digital revolution. Specifically, while Bitcoin and other Fintech firms using blockchain technology have flourished in the absence of regulatory controls, traditional banks have been constrained in their efforts to tap emerging technologies.

- Concerning privacy protections, Wandhöfer acknowledged that personal data warrants good protection. However, privacy protections should not be so burdensome as to inhibit effective use of data or hamper cross-border transfers.

- Related to privacy of a data subject, she pointed out that liability is a looming concern. Wandhöfer noted that some technologies are being developed that would better enable a data subject to "own" his/her personal data. But the question of governance and liability have not been addressed thoughtfully. Consumers need to be better educated about how they can ensure their own privacy through technology tools. This would help to reduce liabilities on financial institutions, she proposed.

- Wandhöfer encouraged the OECD to continue to serve as a forum for fostering greater understanding of how to use data effectively while taking privacy and liability concerns into account in a non-burdensome manner.

Ross LaJeunesse, Global Head of International Relations, Google:
- LaJeunesse reflected on the changes that have taken place at Google since he joined nine years ago. He highlighted the need for balance — a balanced approach to opportunities that digital transformation presents for everyone and the need to provide basic protections for consumers, financial institutions and governments.

- LaJeunesse discussed the need to provide consumers with tools for the digital world and prepare them to be "digital citizens." For example, children may know how to operate a digital device, but they are not being taught that they have a role online and how to ensure the safety of their online presence. "We must prepare them to step up and participate as responsible digital citizens," LaJeunesse said.

- LaJeunesse thanked the OECD for its work on the digital economy and emphasize the need to continue a constructive dialogue on these issues and prepare people to be participants in internet policy in "a world that is already on our doorstep."

Carol Nguyen, Director of Technology Policy, Microsoft Corporation:
- Nguyen described a dialogue that has evolved from a "geeky tech conversation" to a broader economic conversation about how to use technology to realize the UN Sustainable Development Goals (SDGs).

- She observed that as technology has become part of daily life, social issues are coming to the forefront. Echoing the "balance theme," she urged that that policies reflect a balance – economically, socially, technologically, and with respect to governance. Nguyen emphasized that such balance will be crucial to the success of the OECD's horizontal project, "Going Digital."

- Nguyen proposed that cloud computing technology is at the heart of the digital transformation of the economy because it has enabled SMEs to become players in the broader, global economy.

- She noted, however, that the gender digital divide remains a challenge. Women make up more than fifty percent of population, but comprise seventy percent of world's poor. If the gender gap is bridged, some $28 trillion can be added to global GDP by 2020, she noted.
- Nguyen pointed out that cloud computing has facilitated other notable technological breakthroughs, such as AI. Many people have been quick to emphasize the challenges and risks posed by AI, but innovative use of AI in healthcare and medical research can save thousands of lives and billions of dollars by catching errors in clinical practices, she said.
- Ngyuen highlighted that Microsoft is making AI available through cloud services. It is important to have a humanistic vision of AI and how it can be used to empower individuals and expand participation in the digital world. Microsoft feels that technology should have an IQ (intelligence quotient) and an EQ (emotional quotient), she said.
- Nguyen acknowledged that we do not yet have a clear definition of AI. She emphasized that efforts to realize definitional clarity are best pursued through a multistakeholder process.
- She noted that skill development is critical as we move forward. "We must ensure that all people have the skills needed to participate fully [in the digital economy] and understand the importance of preserving the fundamental openness of the internet," Nguyen said.
- Laws and practices also will need to be modernized. "AI requires access to data, and we must consider whether existing laws need to be updated," she said.

Questions and Commentary:

Comment: Moderator **Robert Pepper, Facebook**, *noted the value proposition from use of the Internet. Yet, the persistent gender digital divide indicates that you cannot have an "inclusive Internet" if half the people on the planet cannot get online. One must have robust connectivity and solid infrastructure – at least 3G – but also address issues, such as trust, local content in local languages and cyber risk.*

- Nguyen reiterated the importance of cloud computing to enable the participation of smaller companies in the digital economy. SMEs that use technology can grow very quickly and extend their market reach, which is essential to realizing sustainable local economic growth in developing countries. She further noted that cultural elements that are not readily measurable can also serve as barriers to bridging the digital divide.
  - Responding to a related question about what Microsoft was doing to help SMEs, Nguyen pointed out that Microsoft has been establishing innovation hubs to enable skills development, bring together entrepreneurs and provide start-up funding in developing countries. These "real world applications" will help to implement at least twelve of the seventeen SDGs, she said.
- In terms of building trust and ensuring privacy protection, LaJeunesse termed data localization a misguided way to secure data. This outdated, "Westphalian" approach ends up hurting the small businesses that rely on cloud computing to realize scale. He said that barriers to entry and success in the digital economy do not exist anymore thanks to cloud computing. A small "mom and pop" operation can become a truly global player in no time at all because financials and everything one would need to operate a business are on the cloud.
- Wandhöfer agreed that data localization does more harm than good. Such policies do not allow global companies to have a complete overview of their data. They need this over-arching perspective for enforcement and risk management. "It is critical to be able to use data to reduce digital risk," she said.

o In terms of SME support, Wandhöfer described Citi's [Technology for Integrity Challenge](), which is aimed at encouraging technology innovators from around the world to create cutting-edge solutions to promote integrity, accountability and transparency in the public sector and beyond.

Question: Pepper asked panelists what the OECD might do as part of the "Going Digital" horizontal project to address barriers to 5G.

- Ruff said that several elements must be addressed, such as zoning, uncomplicated licensing and low regulatory fees. She said that in the United States, those have served as obstacles for companies like Verizon.

Question: Going back to Nguyen's point about lack of definitional clarity for AI, Pepper asked how much of this "confusion" is real.

- LaJeunesse concurred with Nguyen that it is important to define the term you are discussing. While there are ethical issues surrounding AI, there are very real and profound benefits of AI, especially in preventing human error. "We need to find balance between users' real concerns and the incredible benefits AI can accrue if we get the policy right. And the only approach that can work is a multistakeholder model that opens the conversation to all."
- Nguyen proposed a spectrum of definition for AI. In a technical domain, there is no agreed definition. And the definition differs across and within sectors. Ethical questions will also vary based on the kind of AI, she noted. Nguyen proposed that technology is not deterministic; it may be too early to have a conversation about regulation. She reiterated that multistakeholder dialogues will continue to be important as we work through the AI definitional issues.

Question: Pepper asked panelists to consider how the OECD can advance the digital economy agenda in a constructive way.

- Ruff said the "Going Digital" horizontal project will be important in promoting a whole-of-government approach to digital transformation. As part of this project, she proposed that the OECD examine the "technology leapfrogging" phenomenon and consider whether developing countries could leapfrog to 5G.
- Wandhöfer reiterated the importance of the multistakeholder approach, noting that any framework for digital transformation must be flexible to accommodate changing technologies. Sharing experiences between countries within the OECD and taking that into an industry dialogue is important, she said.
- LaJeunesse echoed this viewing, saying the OECD has a role in embracing the future and helping us get there through a multistakeholder approach.
- Nguyen urged the OECD to develop a holistic set of policy recommendations that considers more than one perspective and builds upon what has already been agreed.

Session 2: Realizing the Global Commercial Benefits and Corporate Societal Responsibilities of Digitalization

Access to the transformative benefits of digital technologies on a global scale depends on private sector opportunities to invest and compete, sufficient infrastructure, and cross border flows of data and

information. At the same time, business acknowledges a responsibility to channel its digital innovative advancements into initiatives aimed at bridging global development gaps as well as addressing employment disruptions, retraining and skills development. Speakers discussed how digital transformation has affected their business models and commercial opportunities, as well as their sense of corporate responsibility.

Moderator: **Eric Loeb**, Senior Vice President of International External and Regulatory Affairs, AT&T, and Chair, USCIB ICT Policy Committee

Speakers: **David Barnes**, Vice President, Global Workforce Policy, IBM
Ellen Blackler, Vice President, Policy Strategy, Global Public Policy,
The Walt Disney Company
Nigel Cory, Trade Policy Analyst, Information Technology and Innovation
Foundation (ITIF)
Karen McCabe, Senior Director, Technology Policy and International Affairs, IEEE
Damon Silvers, Director of Policy and Special Counsel, AFL-CIO
Andrew Wyckoff, Director of OECD Directorate for Science, Technology
and Innovation (STI)

Eric Loeb, Senior Vice President of International External and Regulatory Affairs, AT&T, opened the session by asking Andrew Wyckoff to discuss the OECD's exploration of the challenges faced by some communities in the still-evolving global digital economy:

Andrew Wyckoff, Director of OECD Directorate for Science, Technology and Innovation (STI), OECD
- Wyckoff said that in general there is angst in the world concerning digital transformation. One hears different things in different cities, such as the following:
  - There is apprehension about the future and where technology change is headed.
  - People see a gap between Technology 4.0 and Policy 1.0 and are uncomfortable about what would be required to close the gap.
  - There is concern about jobs, skills and the nature of work going forward. We are eliminating unsafe jobs through greater use of robotics, but at same time people worry about their skills becoming irrelevant through automation.
  - Trust is a salient concern, as is the protection of personal data.
  - Governments are worried about a potential weakening of their sovereign rights and the Westphalian ethos.
  - There are social concerns about "digital addiction."

Damon Silvers, Director of Policy and Special Counsel, AFL-CIO
- Silvers pointed out that this is not the first time there has been a widespread and passionate conversation about job loss due to technological advancement. During the 1960s, technology changes had a major impact on employment as manufacturing processes were becoming more capital-intensive and less labor-intensive. At that time, the major concern was in potential boredom and alienation because the world of automated work meant that people would only have to work a few hours to live an affluent life. The middle-class auto worker would be able to afford a home and send kids to college – and only need to work for 10 hours.
- Today, we are discussing the same process related to increased productivity from technological advances. Technology and high productivity should mean better jobs, higher wages and an

improved standard of living. But the assumption is that this process will create terrible jobs and generate mass unemployment.

- Silvers urged that we stop being pessimistic about the impact of technology on employment. The job losses have nothing to do with technology, but with management and the concentration of wealth and power, he maintained.

Ellen Blackler, Vice President, Policy Strategy, Global Public Policy, The Walt Disney Company

- The creative economy is an interesting case in point. Blackler noted that over the years, creative companies have changed the way they think about opportunities provided by the digital economy, adopting a more optimistic view, instead of regarding it as a disruptive force.
- What is driving people to make connections and seek improved connectivity and Internet access is their ability to access local and relevant content. It is the demand side of the equation, which is being driven by robust content creation.
- For a healthy "demand side," consumers need to have online protections, while creative content producers need intellectual property protections.

David Barnes, Vice President, Global Workforce Policy, IBM

- IBM is redefining its work environment. It regards current and emerging technologies as enhancing its capabilities and creating an immediate and unmet demand for skills and competencies. It therefore has created a "learning culture" to enable employees to adapt. IBM provides employees with forty hours of learning per year, for a total of twenty-five million hours of learning content annually.
- Barnes highlighted IBM's Watson learning model that curates information regarding the learning needs of each employee, and adapts the content to reflect the employees learning progress and capabilities. He said this approach is delivering far superior up-skilling and re-skilling.
- Given the rapid pace of technological change, IBM now gives its workers the ability to stay relevant and contemporary. Barnes noted that the system learns more about the learner with time and provides more meaningful opportunities and improved career paths.

Karen McCabe, Senior Director, Technology Policy and International Affairs, IEEE

- McCabe provided an overview of the standards development process. She explained that standards are best developed through an open, bottom-up, consensus-driven process that is global in nature. This enables innovation and competition. But the standards development process is competitive and the consensus-building process can be time-consuming.
- Interoperability also is important to ensure that devices and people can work seamlessly and talk together, she said.
- McCabe highlighted that the standards ecosystem needs to evolve to keep pace with technology developments and issues arising from new innovative uses. This has given rise to hybrid standards that go beyond technical, and includes privacy-by-design, security-by-design, and more recently, ethics-by-design. The latter, which is still in the early stages of discussion in standards-setting organizations, endeavors to consider the impact of a technology on individuals. Ultimately, the goal is that standards should help to realize the benefits of the digital economy, she said.

Nigel Cory, Trade Policy Analyst, Information Technology and Innovation Foundation (ITIF)

- Cory emphasized that there is no one-size-fits-all approach for dealing with the challenges of digital transformation. We need to kick-start policy as technology poses new adjustment

challenges, but not in a way that hampers the benefits of innovation. Protectionist measures, data localization, and burdensome standards should be avoided.

- To fully maximize the economic and societal benefits of technology, Cory urged that we focus on its adoption and use – not necessarily reproducing it or re-inventing the wheel. Rather than trying to replicate Silicon Valley as some emerging economies aspire, the focus should be on adapting and using the technology already developed by Silicon Valley to benefit society, he proposed.

Questions and Commentary:

Question: (To Damon Silvers) Where do you see the unions playing the role in facilitating technology?

- Silvers proposed that the employment relationship may change in appearance but it will not change fundamentally in terms of knowledge and power. How do we know who is an employee? The AFL-CIO views it this way: When you work, and that work generates data, if the worker owns the data, he/she is independent. If he/she does *not* own the data, then he/she is an employee. What is the union role in a productive dynamic? To answer that, Silvers proposes that you address the issues of inequality and differences in wealth concentration.
- Silvers echoed Barnes that another critical piece is the learning process. Why is it that we do not place a priority on investment in human capital and learning? He proposed that a fundamental reason is because it is very difficult for companies to prioritize that investment. In the United States, the industries with the highest level of investment in workforce learning are unionized. IBM has a different culture, he noted, but for many firms "it is not rational to make investments in an individual's learning."

*Question: Moderator **Eric Loeb, AT&T**, asked panelist about the responsibility and efforts around establishing trust in the digital economy.*

- McCabe urged that we consider how to align technology with people. The company must consider how to integrate the customer and refer to them as an intricate part of this technology. Once that foundation is built, there is an elevation of trust.
  - Overall, she urged development of a framework enabling these ecosystems to work with each other. These issues will require human standards and ethicists and legal experts. There are multicultural dimensions; many people cannot participate in some parts of the world. There are also generational issues, perhaps requiring greater participation in these discussions from youth, she proposed.
- Barnes highlighted that IBM has coined the term "new collar worker." He explained that the company realized that four-year college degrees no longer are a mandate for a growing number of jobs in areas like analytics, big data and cloud computing. However, these positions do require the right mix of skills, school completion, certification, associate degrees and/or self-taught coding.
  - To find such "new collar workers," IBM create a new school model called PTECH, which entails training with paid internships, mentoring and work experience. For successful graduates, they are often the first in line for jobs offered by sponsoring employers. Importantly, people in PTECH-type programs are from areas of the United States with mature industries where there is high unemployment.
  - Barnes emphasized that the priority for government should be to more effectively target funding for continuing education to match the needs of the labor market. We need to create

incentives for schools to engage with employers to determine the skills needed. "Too many kids are taught things for which there is no employment or are taught skills that have no value," Barnes pointed out.

- In terms of building trust, Blackler also pointed to the need for improved consumer education. "We ask consumers to develop a whole different set of skills than were needed [in earlier years] and there is some frustration," she said. Blackler noted the [UN Human Rights Council's Resolution](#), which states that the same rights that people have offline must also be protected online. Now, some regulators say the same should apply for online consumer protection principles, she said.
  - o Blackler highlighted that piracy has been a huge disruptor for the online industry and there has been growing recognition that this is not a matter that only affects the creative industries and content producers. Rather, the entire value chain needs intellectual property protection. Blackler proposed that the iPad was not created to read email, but to watch video-type material. There will not be anything to watch on an iPad if the content is not protected, she maintained.
  - o Blackler emphasized that it is the developing country (e.g. African) film producers that suffer the most from piracy. "African film producers need to find investors to produce their content but that is hard to do that when they are competing locally with Disney-pirated cheap products," she explained. This not only serves as a barrier to participation in the digital economy by a segment of the developing world, but also creates a general distrust in the online environment.
- Cory said that when considering what countries can do to catch up, it is important that technologies remain interoperable. He noted a lack of rules around these issues, which creates a vacuum. Data needs to flow to create value. There is no value if the data is forced to be stored locally. We must identify and pushback on negative policies and collaborate in disseminating best practices, he urged.

Question: If we want jobs in the digital age, what are some forward-looking policies to realize that goal?

- Silvers painted a pessimistic picture, seeing a fundamental diminution of workers' rights in the economy. "The ability of the labor market and government to deliver on the promise of digital economy has never been weaker," he said. If we are to increase workers' bargaining power, how do we do that in the context of "new collar workers?" he asked. Silvers attributed the growth of platforms like Uber to a soft labor market. Major Silicon Valley firms have the power of data and lock everyone out, he maintained. "This is comparable to how people felt about the early monopolies," Silvers said.
- Barnes commended the OECD for its work on education assessment. An important point to understand is that one can have quality of education, but not necessarily alignment. U.S. schools and colleges do not align curriculums with private sector jobs very effectively, he said. Barnes proposed that if we invest in alignment and consider different approaches to training (e.g., apprenticeships), this will serve as a new channel to acquire talent for the new jobs – and there will be less demand for imported labor.

Session 3: Enhancing Trust in the Digitally Connected Ecosystem

Fostering consumer trust in digital technologies is essential to reap their full economic and societal benefits. Some of the most promising new technologies, such as the Internet of Things and AI as well as

analytic opportunities afforded by use/re-use of data pose new challenges related to privacy and security as well as ethical considerations. Speakers examined the trust-related implications of digital transformation and discuss the OECD's efforts to develop instruments for the digital age which optimize the benefits of data flows with security and privacy concerns.

Moderator: **Peter Lefkowitz**, Senior Data Rights Management Counsel and Chief Privacy Officer, GE Digital

Speakers: **Anne Carblanc**, Head of OECD Digital Economy Policy Division
Andrew Reiskind, Senior Vice President, Data Management, Mastercard
Marc Rotenberg, President, Electronic Privacy Information Center (EPIC)

Peter Lefkowitz, Senior Data Rights Management Counsel and Chief Privacy Officer, GE Digital, opened the session by posing the question, "Why trust?" The EU General Data Protection Regulation (GDPR) includes a section on accountability[3], he noted, but legal compliance is not enough in view of the extent to which emerging technologies, such as the IoT and AI, are becoming ubiquitous. We need a trusted online environment.

Anne Carblanc, Head of OECD Digital Economy Policy Division
- Carblanc, who directs the work of the OECD Committee on Digital Economy Policy (CDEP), including its Working Party on Security and Privacy in the Digital Economy (SPDE), pointed out that trust is a necessary element of interpersonal relations. "You need to have trust in technology, applications, organizations, public institutions and among individuals," she said.
- Carblanc noted that the OECD has three pillars for trust online – privacy, security and consumer protection – which recently have been modernized: (1) the 2013 revised Privacy Guidelines; (2) the 2015 revised Security Guidelines (*Security Guidelines Digital Security Risk Management for Economic and Social Prosperity*); and (3) the 2016 Consumer Protection in E-Commerce. The instruments are generic and can be adapted and applied across all sectors. One key element of this overarching policy framework is the role of risk management.
  - In addition, there are related instruments, such as a recommendation on the protection of electronic authentication, guidelines for cryptography policy as well as cross-cutting instruments, such as a recommendation on health data governance and a recommendation on the protection of children online.[4]
  - Carblanc acknowledged the challenge of measuring "trust" with statistics. However, this is a priority for the OECD going forward and represents one of the mandates of the 2016 Cancun Ministerial, which was to develop better data to inform evidence-based analysis.

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[3] The concept of "*accountability*" is outlined in art. 24 of the EU General Data Protection Regulation (GDPR), which specifies that the Data Controller should implement (as well as review and update) adequate technical and organizational measures to ensure and be able to demonstrate that the processing operations are carried out according to the new rules. In short, the Data Controller must be able to prove that the organization is in compliance with the principles set forth in the GDPR concerning personal data processing, such as lawfulness, fairness and transparency, purpose limitation, minimization, accuracy, retention limitation, integrity and confidentiality.
[4] See Digital Economy, digital transformation: OECD work on trust, page 2.

Andrew Reiskind, Senior Vice President, Data Management, Mastercard
- Reiskind noted that trust is very important or consumers will not use online payment devices. But the online platform does not provide opportunities to build trust comparable to more traditional personal relationship-building. In today's digital economy, however, every transaction is data driven. Most businesses need to use data to develop products; we are in a world of data-by-design. Businesses therefore need guidelines and standards, especially with respect to ethics.
- In terms of accountability, a participant in the digital economy must be thoughtful and mindful of the data being used. Developing good accountability frameworks require risk management – which is an important underpinning of both the OECD privacy guidelines and OECD security guidelines. Do the risks of using the data outweigh the benefits? If so, then a responsible approach to accountability mandates that you stop collecting/using that data. A company should be accountable in how it organizes the data. Trust is key, but it is a virtuous cycle.
- As the digital economy evolved, business has come to realize that it must use data well. "If you use data poorly, it will destroy your business, Reiskind said.

Peter Lefkowitz, Senior Data Rights Management Counsel and Chief Privacy Officer, GE Digital General Electric:
- Lefkowitz provided background on GE. He noted that GE's model has evolved from Business-to-Consumer to pure Business-to-Business. For example, GE Digital will host data for customers; they can then use this platform and build or buy apps to manipulate and manage their own meta data. In addition, GE is active in helping to develop smart cities. It has developed innovative ways to collect crime-related data that is sent directly to the city manager, among other smart city innovations. Each use is highly regulated, he noted, but regulated in different ways.
- GE Digital's experience points to the need for data governance standards. We should strive for data protection-by-design, with security as a core principle, he proposed. Lefkowitz called for business to think beyond phones and communications networks, and focus on conceptualizing an over-arching framework. "We need to take a large view but still need to consider what already exists. While not complete, there are regulations we must operate in," Lefkowitz said.

Mark Rotenberg, President, Electronic Privacy Information Center (EPIC)
- Rotenberg commended the OECD for doing two things exceptionally well: (1) it develops evidence-based policy; and (2) it develops policy frameworks that provide guidance toward a common solution to a common problem.
- Concerning the importance of building trust, Rotenberg highlighted research indicating that consumers cannot make informed decisions around privacy policies. This means a "notice and consent" approach is not very workable. And an "opt-in" approach is not helpful unless the user knows exactly what information is being used. Nevertheless, consumers turn their personal information over to a company, but have no way of knowing whether the company has encrypted data storage or has properly trained its employees.
- From an economic perspective, it is the responsibility of the business collecting and using personal information to safeguard the data they choose to collect -- and it is role of government to hold business accountable, Rotenberg said.

Questions and Commentary:

*Question: Moderator **Peter Lefkowitz** asked the panelists for some final reflections on the trust challenge, particularly with respect to AI and the need to enhance global understanding of this technology.*

- Rotenberg expressed keen interest in the OECD's potential development of a framework or international guidelines for AI, possibly during 2019. One of the key challenges going forward is information asymmetry, he proposed. Companies are facing increasing frustration in understanding automated procedures. "We're beginning to lose control of our inventions; there's a need to reestablish accountability over enormously complex systems," he said. Rotenberg advocated "algorithmic transparency" as a means of reestablishing control over systems.
- Carblanc reiterated that trust is a difficult issue to solve, given its many facets and complexity. She agreed with Rotenberg about the challenge of information asymmetry, and urged that the concept of transparency be revisited in addition to ensuring that governments hold companies accountable.
  - She also underscored the importance of a risk management approach to ensuring privacy and security online. Carblanc noted that until recently security was treated as a technical issue and data protection was regarded as a legal issue. The OECD's work determined that digital transformation has rendered that approach obsolete. "We need to focus on managing risks to preclude adverse economic and social consequences," she said.
- Reiskind underscored that it is up to companies to be accountable. He urged new frameworks that build upon what is already in place – as developed by the OECD as well as regulatory regimes, such as the GDPR – to guide us with respect to the use of machine learning. "There are exciting frameworks and patterns of practice. Let's build upon what's already there, so that there is a continuation of good groundwork," he proposed.
- Lefkowitz commended the OECD for recognizing that frameworks for addressing trust should be developed in a manner that balances interests. "There is not one absolute."
- Building upon this, Carblanc wrapped up the day-long conference by discussing the process underlying the OECD's development of legal instruments and policy recommendations. She said that the OECD considers many different stakeholder views and builds a consensus. "We believe that when we reach consensus, we have a better chance that [the policy recommendations] will be implemented," she said. "The OECD is developing high-level policy not to impede or block progress but to bring as many guarantees as possible so that things can continue to evolve in a beneficial manner for society in general."